

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

REC'D 17 JAN 2005

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| Applicant's or agent's file reference PHBE020030WO | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416) | |
| International application No. PCT/IB 03/04240 | International filing date (day/month/year) 29.09.2003 | Priority date (day/month/year) 27.09.2002 |
| International Patent Classification (IPC) or both national classification and IPC G11B27/00 | | |
| Applicant KONINKLIJKE PHILIPS ELECTRONICS N.V. AT AL. | | |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 7 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 1 sheets.

3. This report contains indications relating to the following items:

- I Basis of the opinion
- II Priority
- III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV Lack of unity of invention
- V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI Certain documents cited
- VII Certain defects in the international application
- VIII Certain observations on the international application

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| Date of submission of the demand 26.01.2004 | Date of completion of this report 18.01.2005 |
| Name and mailing address of the international preliminary examining authority: European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016 | Authorized Officer Ogor, M Telephone No. +31 70 340-4458 |



**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/IB 03/04240

I. Basis of the report

1. With regard to the elements of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-10 as originally filed

Claims, Numbers

1-5 as amended (together with any statement) under Art. 19 PCT

Drawings, Sheets

1-5 as originally filed

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/IB 03/04240

5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).
(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees, the applicant has:

- restricted the claims.
- paid additional fees.
- paid additional fees under protest.
- neither restricted nor paid additional fees.

2. This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- complied with.
- not complied with for the following reasons:

see separate sheet

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- all parts.
- the parts relating to claims Nos. 1 4 5 .

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|-------------|-------|
| Novelty (N) | Yes: Claims | 1 |
| | No: Claims | 4 5 |
| Inventive step (IS) | Yes: Claims | 1 |
| | No: Claims | 4 5 |
| Industrial applicability (IA) | Yes: Claims | 1 4 5 |
| | No: Claims | |

2. Citations and explanations

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/IB 03/04240

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/IB 03/04240

Reference is made to the following documents. They were already cited in the International Search Report:

D1: XP002147696
D2: US-A-4 953 122

Item IV

This Authority is of the opinion that three inventions are claimed in the present application.

Document D1 discloses a method enabling reuse of a previously used write-once disc (par 2.2.10: direct overwrite capability). Hence claim 4 is not new. Claim 5 is not new either, mutatis mutandis.

A) Invention 1

D1 discloses as well a method for recording information on a write-once disc, wherein the method is adapted to enable random recording and overwriting on said write-once disc (par 2.2.10: the virtual allocation table gives the appearance of a randomly rewritable disc).

A.i) Amended claim 1 (Article 19 PCT) differs from D1 in checking whether the requested location in a first area is still unwritten; if free, writing to the requested location, if not free writing to a free location in a second area; and updating a table administrating the relation between the requested location and the actual location.

A.ii) The objective problem of amended claim 1 is to perform random recording and overwriting of a write-once medium. The special technical feature solving this problem is the use of reassignment maps.

B) Invention 2

B.i) Claim 2 differs from D1 in the defect management process.

B.ii) From this we can formulate a remaining objective problem of avoiding write errors. The special technical feature solving this problem is performing a defect management process when recording onto the medium of the write-once type.

C) Invention 3

C.i) Claim 3 differs from D1 in the "undo" of previous recordings.

C.ii) The remaining objective problem may be regarded as providing a facility to restore data backups of previously recorded data. This is solved by adding multiple forward and

backward pointers in the data structure.

Neither the objective problems underlying the subjects of the three claimed inventions, nor their solutions defined by the special technical features allow for a relationship to be established between said inventions. In conclusion, amended claim 1, claims 2 and 3 are not linked by common or corresponding special technical features, and define three different inventions not linked by a single general inventive concept. Therefore the requirement for unity of invention, referred to in Rule 13.1 and 13.2 PCT, is not fulfilled.

The applicant neither restricted the claims nor paid any additional fees. Only the searched claims (first invention) is examined here.

Item V

1) The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 4 and 5 is not new in the sense of Article 33(2) PCT.

Document D1 discloses a method enabling reuse of a previously used write-once disc (par. 2.2.10: appearance of direct overwrite capability). Hence claim 4 is not new. Claim 5 is not new either, mutatis mutandis.

2) The subject-matter of claim 1 appears to be new and inventive (Article 33(2) and (3) PCT).

D1 discloses (see par.2.2.10) a method for recording information on a write-once disc, wherein the method is adapted to enable random recording and overwriting (appearance of a randomly writable medium and of direct overwrite capability) on said write-once disc.

Claim 1 differs from D1 in checking whether the requested location in a first area is still unwritten; if free, writing to the requested location; if not free, writing to a free location in a second area; updating a table administrating the relation between the requested storing location and the actual storing location. Claim 1 is therefore new (Article 33(2) PCT).

The remaining objective problem can be regarded as preventing accidental overwriting in a write-once disc having the overwriting capability (see description p.4, I.29-32). The special technical features solving this problem are the administration of free (in other words: valid) and occupied (in other words: invalid) areas and the use of reassignment maps.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/IB 03/04240

D2 teaches the administration of valid and invalid areas (flaw map), and the use of pointer maps for rewriting a WORM disc. However it does not prevent accidental overwriting. Therefore claim 1 is considered to be inventive (Article 33(3) PCT).

CLAIMS:

EPO - DG 1

26. 01. 2004

(47)

1. A method for recording information on a recording medium of the write once type, wherein the method is adapted to enable random recording and random overwriting on said recording medium of the write once type, said method comprising
 - a first step of receiving a request for storing the information at a requested storing location
 - 5 in a first area on said recording medium,
 - a second step of checking whether the requested storing location is still unwritten,
 - a third step of writing the information to the requested storing location in the first area when the requested storing location is still unwritten, or of writing the information to a free storing location in a second area on said recording medium when the requested storing location is
 - 10 written, and
 - a fourth step of updating a table administrating the relation between the requested storing location and the actual location in the first area or the second area on said recording medium the information is written in.
- 15 2. A method for recording information on a recording medium of the write once type, wherein the method is adapted to perform defect management when recording onto said recording medium of the write once type.
3. A method for recording information on a recording medium of the write once type, wherein the method is adapted to enable undo of previous recording on said recording medium of the write once type.
- 20 4. A method for recording information on a recording medium of the write once type, wherein the method is adapted to enable reuse of a previously used recording medium
- 25 of the write once type.
5. A recording device for recording information on a recording medium of the write once type, said device adapted for carrying out the method according to claim 1, 2, 3, or 4.